

STRUCTURE G-301
(STA-1 Diversion Structure)

Diversion structure G-301 consists of a reinforced concrete spillway with three vertical lift gates installed on the crest of an ogee spillway. Structure G301 is located in the L-7 borrow canal approximately 70 meters east of G-302.

PURPOSE

Structures G301 and G-300 are intended to act in parallel and discharge up to 4,800 cfs of untreated stormwater from S-5A into WCA-1 in the event of an extreme rainfall event in the S-5A basin that exceeds the capacity of STA-1W and STA-1E.

OPERATION

G-301 can be operated remotely or manually as required to divert water away from STA-1E or STA-1W. The structure is controlled by Operations staff in response to upstream/downstream stages, environmental conditions (storms, drought, etc.), and Operation Plan guidelines. Flow diversion to WCA-1 will begin at Inflow Basin stages of 18.0 ft NGVD. Other operational strategies may be applied to maintain Inflow Basin stages below 19.0 ft NGVD for large storm events. Diversion of untreated stormwater around STA-1E or STA-1W is discouraged according to the Settlement Agreement but may be necessary following severe storm events. Additional information is contained in the STA-1E or STA-1W Operation Plan which are revised on a regular basis.

FLOOD DISCHARGE CHARACTERISTICS

	<u>Design</u>	<u>Standard Project Flood</u>
Discharge Rate	4800 cfs	3600 cfs*
Headwater Elevation	18.5 ft	19.4 ft
Tailwater Elevation	14.0 ft	19.0 ft
Type Discharge	uncontrolled free	submerged controlled

DESCRIPTION OF STRUCTURE

Type:	Reinforced concrete gated spillway
Gates:	Vertical lift
Number	3
Size	11.7 ft high x 22 ft wide
Weir Crest	
Net Length	66 ft
Elevation	7.7 ft NGVD
Service Bridge Elevation:	21.5 ft NGVD

STATION POWER

Normal:	Commercial electricity
Emergency:	Generator

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Telemetry:	Gate position from 0.00 to 8.00' (3 gates), stilling wells (HW & TW); Flow
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Staff gauges:	HW and TW
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Water quality monitoring:	Samples collected biweekly on HW side
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DATE OF ACCEPTANCE INTO SERVICE

January, 1999

ACCESS

From S-5A, south along L-7 approximately 0.75 mile (G-301).

*Must have Area-1 key to access this structure.